

## ADDITIONS AND CHANGES TO THE BRITISH FAUNA OF FUNGUS GNATS (DIPTERA: MYCETOPHILIDAE)

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### ABSTRACT

Six species of Mycetophilidae are added to the British list from Scotland. These and another recently added species, *Mycomya paradentata* Väisänen, 1984 are figured. The female of *Creagdhubhia mallochorum* Chandler, 1999 is newly described and figured. The new synonymy *Phronia vitrea* Plassmann, 1999 = *P. carli* Chandler, 2001 is proposed. A new name *Sciophila pomacea* **nom. n.** is proposed for the preoccupied name *Sciophila ochracea* Stephens in Walker, 1856. *Mycetophila sigillata* Dziedzicki, 1884 of the British list is shown to be *M. subsigillata* Zaitzev, 1999.

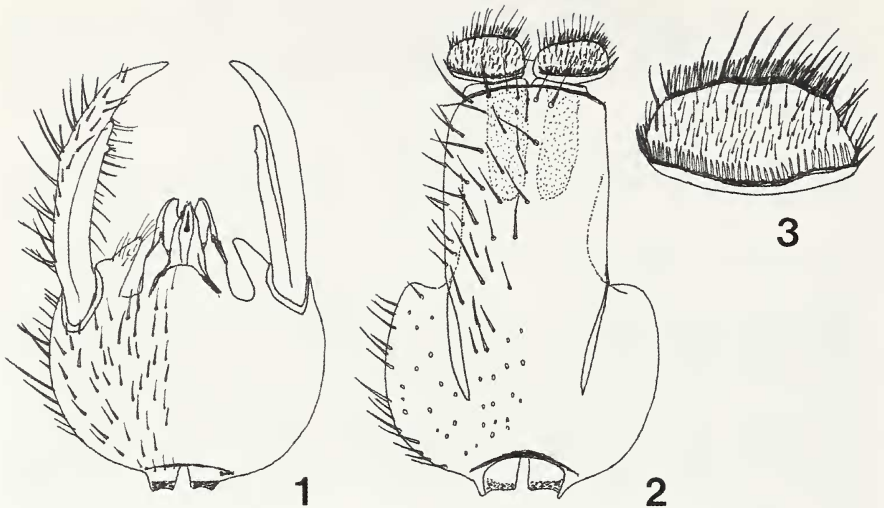
### INTRODUCTION

The British list of fungus gnats was last updated by Chandler (2001) but further additions were already coming to notice when that paper was published. It is still not possible to provide names for the *Docosia* and *Cordyla* species mentioned then as revisions of the European species of these genera are still pending. A new species of *Pseudexechia* has recently been added (Kjaerandsen & Chandler, 2006) and further changes in that genus will be published elsewhere. Other additions and changes are reported here, in this instance all belonging to the family Mycetophilidae. Four of the additions result from Malaise trapping on the Royal Society for the Protection of Birds (RSPB) Abernethy Estate in Scotland and the discovery of these species, three of them represented by single specimens, shows that there is still potential in the Highlands for further additions to our fauna despite the increased recording there in recent years. Although collected in 1999, this material was only sorted and identified in 2004.

Most of the species added here belong to the groups covered by Hutson *et al.* (1980) and these species are figured and indication given where they fit in the keys provided in that handbook. For consistency the one species of Mycetophilinae added here is also figured. The higher classification used follows Chandler (2004) although some other authors prefer to follow Edwards (1925) and accord tribal status within Sciophilinae to the first three subfamilies covered.

The following abbreviations are used for institutions in which specimens are deposited. Other material cited is in the author's collection:

- BMNH Natural History Museum, London.
- NMS National Museums of Scotland, Edinburgh.
- NMW National Museum of Wales, Cardiff.
- ZSM Zoologische Staatssammlung, Munich, Germany.



Figs 1–3. Male genitalia of *Boletina landrocki* Edwards: 1, ventral view of gonocoxites and gonostyli; 2, dorsal view of tergite 9 (fused to gonocoxites basally) and cerci; 3, cercus.

#### THE SPECIES

##### Gnoristinae

##### *Boletina bidenticulata* Sasakawa & Kimura, 1974

Zaitzev *et al.* (2006) have shown that *Boletina dispecta* Dziedzicki, 1885 is on the British list due to a misidentification and our species should be known by the above name. They figured the male genitalia and provided a key to nine species of this group.

##### *Boletina landrocki* Edwards, 1924

(Figs 1–3)

New to Britain. This is a fairly large species, wing length 5.3–5.5 mm of similar build to *B. villosa* Landrock, 1912, which was found at the same locality. It has the body all black and the antenna dark except for the base of the first flagellomere. The palpi and halteres are yellow. The legs are yellow except for black trochanters. It has the laterotergite setose, Sc bare, sc-r present and the posterior claw of the fore leg modified into a broad black lobe. In the keys by Hutson *et al.* it runs to the couplet including *B. nasuta* (Haliday, 1839) and *B. pectinunguis* Edwards, 1932 but lacks the facial horn and yellow basal flagellomeres of the first while the latter has all the male claws modified and a third medial comb on each cercus.

This is apparently a boreo-alpine species with previous records from Norway, Finland, the Baltic states and northern Russia. It is newly recorded from France in Fauna Europaea (Chandler, 2004) and details of that record will be published elsewhere.

*Boletina landrocki* belongs to the group of the genus with the gonostylus basally divided into two lobes (Fig. 1). In the British fauna this also includes *B. nasuta*, *B. pectinunguis*, *B. villosa*, *B. dubia* (Meigen, 1804) and *B. plana* (Walker, 1856). Of

these *B. dubia* and *B. plana* differ from *B. landrocki* in having Sc setose and in *B. dubia* sc-r is absent. The modification of the male claws in *B. landrocki* is shared with *B. plana*, *B. nasuta* and *B. pallidula* Edwards, 1925, the last with undivided gonostylus. Some other species have like *B. pectinunguis* modified claws on all legs, *B. dubia* among the above group and two species with undivided gonostylus, *B. basalis* (Meigen, 1818) and *B. groenlandica* Staeger, 1845 while *B. villosa* differs in having all claws unmodified.

Three other European species also have the gonostylus divided. Of these *B. hundbecki* Lundström, 1912 and *B. oreadophila* Chandler, 1995 have the internal lobe deeply bifid apically, while *B. conformis* Siebke, 1864 has it with an apical spinose seta as in *B. villosa*.

Material examined. SCOTLAND: Inverness-shire, Abernethy Forest RSPB Reserve, by River Nethy, 20.ix–3.x.1999, 4 males, 2 females, leg. RSPB.

### *Boletina kivachiana* Polevoi & Hedmark, 2004

*Boletina nigrofusca*: Edwards, 1925: 575, misidentification

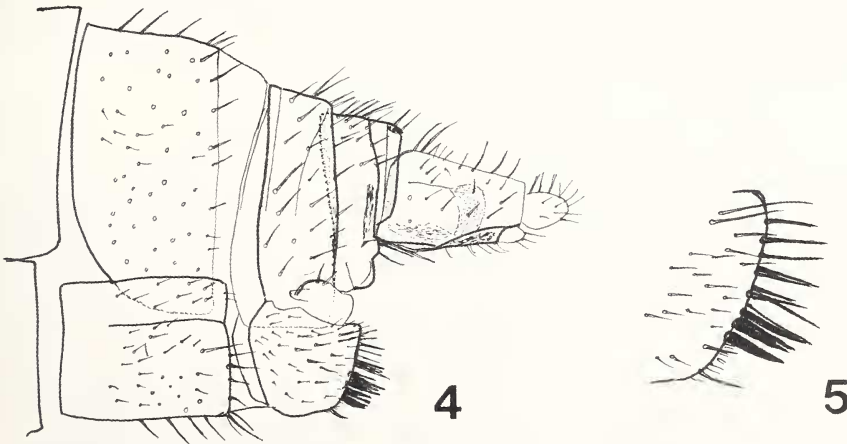
This change has been noted in *Dipterists Digest* (Editor, 2004). Polevoi & Hedmark (2004) described *B. kivachiana* from Finland but also noted that it was the species identified by Edwards (1925) and Hutson *et al.* (1980) as *B. nigrofusca* Dziedzicki, 1885. Edwards noted that the British specimen he had examined (Dingwall) did not fully agree with Dziedzicki's figures (Dziedzicki, 1885, Plate V, Figs 14–17) but thought this insufficient to establish a new species.

Material examined. SCOTLAND: Perthshire, Birks of Aberfeldy, 20.vii.1990, leg. P.J. Chandler; Elgin, Logie, 22.ix.1909 and ix.1913, leg. F. Jenkinson (BMNH and NMS); East Ross, Dingwall, 22.vii.1909, leg. J.J.F.X. King (BMNH).

### *Creagdhubhia mallochorum* Chandler, 1999

(Figs 4–5)

This species was described from a single male from Creag Dhubb, Perthshire (Chandler 1999). Further examples of both sexes have been found in Malaise trap



Figs 4–5. Ovipositor of *Creagdhubhia mallochorum* Chandler: 4, lateral view; 5, detail of lateral lobe of sternite 8.

samples from the Mar Lodge Estate, Aberdeenshire so it is possible to describe the female. The specimens are not in good condition, having become partly dismembered after a few years in spirit so have lost most legs. The males agree with the previous description in having the radial cell quadrate unlike the females, but agree with the females in having sc-r a little less apical in position. All of these specimens of both sexes have all the fork veins complete to the wing margin so the slight abbreviation of  $M_2$  and  $CuA_1$  described and figured for the holotype does not appear to be typical. The description of the male antenna as being as long as the thorax appears to have been an error for twice as long as the thorax according to these further males examined.

Female. Similar to male in most respects. Antenna more slender and shorter, about equal in length to head and thorax together but proportion of flagellomeres similar. Palpus slender and shorter than in male, about as long as two thirds height of eye.

Legs with coxae and trochanters all dark, otherwise yellow. Mid tibia simple and unmodified, lacking the slight swelling and bare strip near the base in the male.

Wing venation similar but sc-r more basal, nearer to level of apical third of vein Sc. Vein  $R_4$  further removed from  $R_s$  than in male, so that radial cell is 1.5–2.0 as long as broad, but slightly different in position in the two wings of each specimen.

Abdomen with tergites 2–6 subequal, tergite 7 shorter and ovipositor partly contracted into it in situ. Ovipositor (Fig. 4) mainly, including cercus and apical part of sternite 8 yellow. Sternite 8 (Fig. 5) bears 5–6 spinose setae on each side of its apical margin.

Wing length 4.9–5.4 mm.

Material examined: SCOTLAND: Aberdeenshire, Mar Lodge Estate: Dubh Ghleann (NO076956), 19.vi.2000, 2 males, 1 female; Upper Quoich (NO095952), 21.vi.2000, 2 females (all ex Malaise traps, leg. A. Godfrey).

### *Ectrepesthoneura* Enderlein, 1911

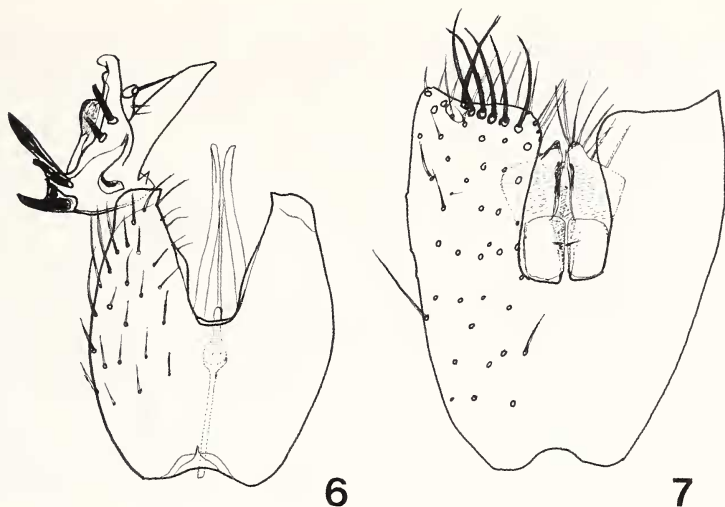
Descriptions and detailed figures of the ovipositors of the three species of this genus previously recorded as British (Chandler, 1980; Hutson *et al.*, 1980) have been provided by Martinsen & Söli (2000), which enables identification of the females. The female of the species added here has not, however, been described.

### *Ectrepesthoneura tori* Zaitzev & Økland, 1994

(Figs 6–7)

New to Britain. This is a rare species, which was described from Norway by Zaitzev & Økland (1994) but has since been recorded from the Czech Republic, Germany, northern Russia and Italy. Kurina *et al.* (2005) have recently added Sweden to the distribution.

*Ectrepesthoneura tori* is a small species (wing length of British specimen 2.3 mm), entirely dark bodied with mainly yellow legs. The scape is black, the pedicel contrasted brownish yellow and the flagellum brownish, the palpi yellow and the legs mainly yellow. The mid and hind coxae are brownish and the hind femur has a slight brownish shade apically. It is thus closest to *E. pubescens* (Zetterstedt, 1860) in the colour characters given by Hutson *et al.* (1980) but the costa clearly extends more than halfway from  $R_5$  to  $M_1$  and it differs in the arrangement of setae on the hind tibia. The anterior setae are larger and more widely spaced on the basal half but form



Figs 6–7. Male genitalia of *Ectrepesthonewa tori* Zaitzev & Økland: 6, ventral view of gonocoxites and gonostyli; 7, dorsal view of tergite 9 and cerci.

a continuous row with the short close-set setae on the apical half; the dorsal setae are also sparse on the basal half but close-set on the apical half.

Tergite 9 (Fig. 7) is large and covering the genitalia dorsally as in most species of the genus and most resembles *pubescens* of the British species in having a simple apical margin that is narrowly cleft medially. However, the structure of the gonostylus (Fig. 6) is rather different with a convoluted surface bearing strong broadly flattened setae.

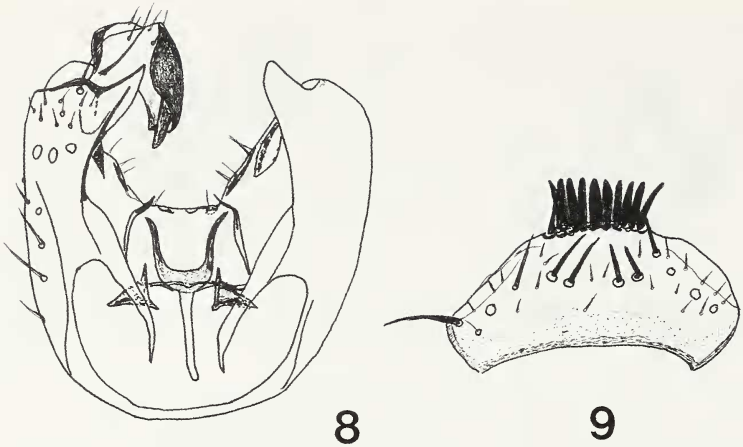
Material examined. SCOTLAND: Inverness-shire, Abernethy Forest RSPB Reserve, Bognacruie, 3.viii–25.ix.1999, Malaise trap, 1 male, leg. RSPB.

### *Syntenna setigera* Lundström, 1914 (Figs 8–9)

New to Britain. Polevoi (2003) revised the Palaearctic species of this genus and provided a key to eleven species based on male genitalia. In this respect *S. setigera* differs from other British species in having tergite 9 (Fig. 9) broadly tapered apically and the comb of strong setae that characterises most species of the genus appears set directly on the margin rather than on a medial lobe as in the other three British species. In Polevoi's key it is coupled with *S. penicilla* Hutson, 1979 as both have a single row of subsidiary setae on the disc of tergite 9 but *S. penicilla* has tergite 9 broadened immediately basal to the comb and lacks the apical internal flap of the gonocoxites present in *setigera*.

The body of the British specimen (wing length 2.8 mm) is entirely dark with dark bristling, the antennae and palpi brownish, the coxae brownish but the legs otherwise yellow. Abdominal coloration is variable in this genus so cannot be used as a key character.





Figs 8–9. Male genitalia of *Syntenna setigera* Lundström: 8, dorsal view of gonocoxites and gonostylus; 9, dorsal view of tergite 9.

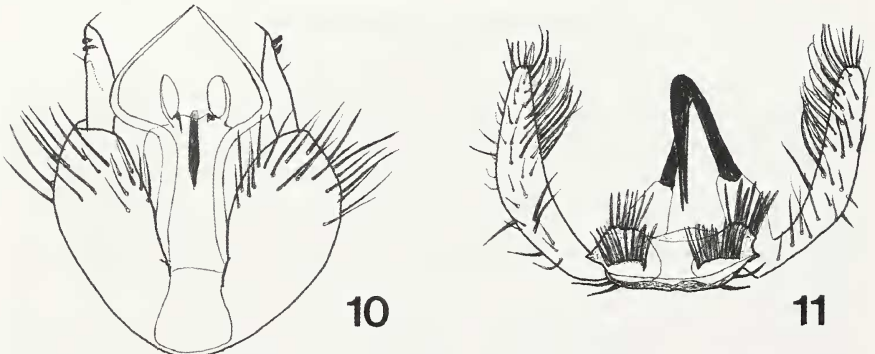
Material examined. SCOTLAND: Inverness-shire, Abernethy Forest RSPB Reserve, Bognacruie, 3.viii–25.ix.1999, Malaise trap, 1 male, leg. RSPB.

#### Mycomyinae

#### *Mycomya (Mycomyopsis) paracentata* Väisänen, 1984

(Figs 10–11)

This species was added to the British list from Sheephouse Wood, Yorkshire by Coldwell (2004), who stated that it had already been found in Wales. This is a widespread western Palaearctic species including France, Denmark, Sweden, Finland, Poland, Ukraine and Russia (Väisänen, 1984). The Welsh records were from a survey of woodlands carried out using Malaise traps by Brian Levey and Mark Pavett (National Museum of Wales).



Figs 10–11. Male genitalia of *Mycomya paracentata* Väisänen: 10, dorsal view of gonocoxites and gonostylus; 11, dorsal view of tergite 9.

*Mycomya paracentata* belongs to the subgenus *Mycomyopsis*, characterised by distinctive genital structure of the male with tergite 9 (Fig. 11) possessing setose lateral appendages and paired combs of spinose setae medially. The male coxae are simple without any secondary sexual characters and the posterior fork of the wing begins distal to the base of the stem of the median fork. The body is mainly dark, with yellow markings on the thorax restricted to the prothoracic sclerites and the humeral area and narrow sides of the mesonotum.

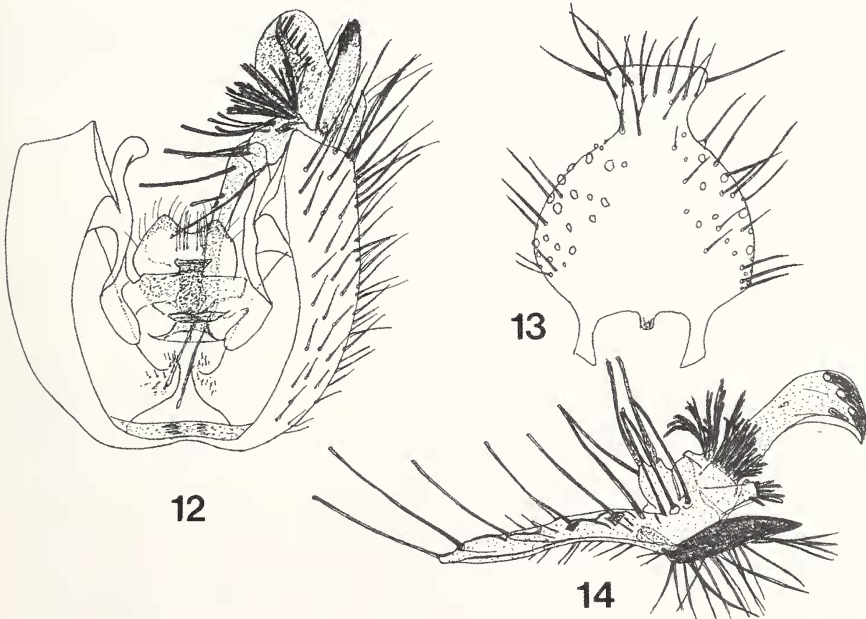
From the five previously known British species of *Mycomyopsis*, *M. paracentata* is distinguished by the tergal lateral appendages (Fig. 11) having a dense brush of close-set setae occupying the apical half of the internal face with sparsely scattered setae on most of their surfaces while the other species have this appendage more uniformly setose and all except *M. affinis* (Staeger, 1840) have a row of flattened setae internally or apically in the case of *M. trilineata* (Zetterstedt, 1838). It agrees with *M. affinis*, to which it runs in the key by Hutson *et al.* (1980), in having the fork veins practically devoid of setulae but agrees with the other species in the presence of slender curved sternal submedian filaments (Fig. 10) that are lacking in *M. affinis*.

Material examined. WALES: Merionethshire, Coed y Rhygen, 14.vii-8.ix 1999, 3 males, 1 female, leg. B. Levey & M. Pavett (NMW).

### Sciophilinae

#### *Sciophila* Meigen

Additions and changes to this genus were covered by Chandler (2001) but it was then mentioned that description of a further species was awaited. This has now been



Figs 12–14. Male genitalia of *Sciophila salassea* Matile: 12, dorsal view of gonocoxites and gonostylus, without tergite 9 but including cerci; 13, dorsal view of tergite 9; 14, internal view of gonostylus.

described as *S. krysheni* Polevoi, 2001. Another species from Scotland is added here. It is also necessary to provide a replacement name for a homonym.

### *Sciophila salassea* Matile, 1983

(Figs 12–14)

New to Britain. This species was described from the valley of Aosta in the Italian Alps and has since been recorded from Norway and Russian Karelia. Only a single male has been found in Britain but Jostein Kjaerandsen kindly forwarded some Norwegian material for comparison. He has also examined type material of *salassea* at Paris and confirmed it to be conspecific.

Male. Head dark brown. Antenna dark, only slightly paler at base of first flagellomere; flagellomeres 2–6 about twice as long as broad, subsequent flagellomeres becoming progressively more slender with apical one most elongate. Palpus longer than height of head, brownish yellow; terminal palpomere paler and more slender.

Thorax entirely dark with pale bristling. Pleura bare. Laterotergite and mediotergite with long pale bristling

Legs yellow, except for trochanters with dark patch beneath and tarsi appearing more brownish; tibial spurs yellow. Coxae with long yellow bristling. Femora with short brown hairs. Tibiae and tarsi with short black setae. Mid tibia with 5 *a-d*, 2 *p-d*, 3 *p* and 3 *p-v* setae. Hind tibia with 5 *a*, 4 *a-d* and 5 *p-d* setae about as long as tibial width and 4 shorter *p* setae on apical half.

Wing broad (maximum width 1.4–1.6 mm), yellowish, with both macrotrichia and microtrichia evenly distributed over entire membrane. Vein *sc-r* level with base of *Rs*. Vein *R*<sub>4</sub> present, forming a quadrate radial cell. Costa produced 0.2 distance from *R*<sub>5</sub> to *M*<sub>1</sub>. Stem of median fork short, less than half as long as crossvein *r-m*. Median and posterior forks complete. Posterior fork begins level with basal quarter of median fork. Haltere yellow.

Abdomen entirely dark with yellowish to brown hairs and some longer setae dorsally on tergite 7. Tergite 9 (Fig. 13) laterally rounded but constricted before a short blunt apical lobe bearing irregular setae on its margin. Genitalia with gonocoxites (Fig. 12) dark brown, gonostylus mostly yellow with dark brown setae. Gonostylus (Fig. 14) with dorsal lobe elongate, apically broadened and asetose apart from a comb of short flattened setae apically; internal lobe bearing branched setae; ventral lobe broad apically, with elongate proximal lobe bearing long strong setae.

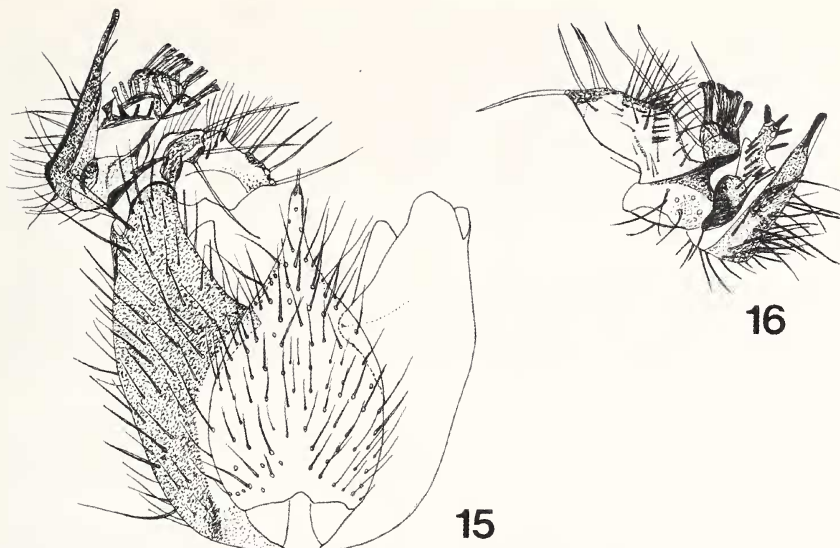
Wing length 3.0–3.7 mm.

Female. Not examined.

Material examined. SCOTLAND: Inverness-shire, Abernethy Forest RSPB Reserve, by River Nethy, 19.vi–5.vii.1999, 1 male, leg. RSPB, deposited in National Museums of Scotland, Edinburgh (NMS). NORWAY: MRI [= Møre og Romsdal inner], Øvre vike, 12.vi–2.vii.1999, Malaise trap, 3 males, leg. O. Hassen (1 deposited in NMS, others in author's collection).

*Discussion.* This is a small species with distinctive genital structure, the dorsal lobe of the gonostylus being especially striking. The form of the other parts of the gonostylus is more typical of the genus. In the key by Hutson *et al.* (1980) it runs to the couplet including *S. cliftoni* Edwards and *S. fridolini* Stackelberg, 1943 but apart from the gonostylar structure it differs from them in the form of tergite 9, which is similar among British species to that of *S. nigronitida* Landrock, 1925, a darker species with the hind femur black apically. Matile (1983) suggested that it formed a natural group with this and two other boreal species, the Palaearctic *S. fuliginosa*





Figs 15–16. Male genitalia of *Sciophila krysheni* Polevoi: 15, dorsal view, with tergite 9 *in situ*, of gonocoxites and gonostylus; 16, internal view of gonostylus.

Holmgren and Nearctic *S. canadensis* Zaitzev, 1982. The latter species differ in other details of the genital structure, *S. nigronitida* and *S. fuliginosa* differing most obviously in the ventral lobe of the gonostylus being pointed and bearing short setae apically.

### ***Sciophila krysheni* Polevoi, 2001**

(Figs 15–16)

New to Britain. This was first recognised from the male collected by Ivan Perry but introduction to the British list was deferred pending description from Finland. Subsequently, Andrew Godfrey found further examples. The description of the British specimens provided below agrees well with that by Polevoi (2001).

Male. Head black, grey dusted, with all setae pale yellow. Antenna longer than thorax with scape, pedicel and flagellomeres 1–3 clear yellow, 4 obscurely yellow basally, the rest black; flagellomeres 2.5–3× long as broad. Palpus slender, yellow.

Thorax black but strongly grey dusted; proepisternum brownish yellow with many long yellow setae; mesonotum covered with long pale yellow setae. Anepisternum with short pale setae on anterior part. Laterotergite with long yellow setae. Scutellum with long yellow setae on disc and margin.

Legs yellow with tarsi pale basally on first tarsomere, progressively appearing more brownish. Femora with pale yellow hairs, tibiae with brown setulae and darker setae, tarsi with all setae and setulae dark.

Wing clear with costa, radial veins and vein tb brownish and bearing dark setulae. Wing membrane covered with both microtrichia and macrotrichia, the latter being sparser in the basal cells from costa to tb. Vein sc-r just beyond junction with Rs. R<sub>4</sub> vertical, forming a square radial cell. Costa exceeding tip of R<sub>5</sub>. Stem of median fork

shorter than crossvein r-m. Posterior fork begins opposite level of tip of Sc. Fork veins complete. Squama with pale marginal hairs. Haltere clear yellow.

Abdomen dark brown with pale setae. Genitalia (Figs 15–16) entirely dark brown with dark setae. Tergite 9 (*in situ* in Fig. 15) broadly rounded basally, tapered apically to end in slender median process. Outer lobe of gonostylus (Fig. 16) tapered to blunt tip. Some intermediate lobes with flattened or apically enlarged macrochaetae, lower lobe triangular with long yellow setae on dorsal and apical margin and transverse row of short black setae are internally projected on its basal half.

Wing length 3.2 mm.

Female. Unknown.

Material examined. SCOTLAND: Perthshire, Black Wood of Rannoch, Allt nan Bogair, 2.vi.1998, 1 male, leg. I. Perry, deposited in NMS. Aberdeenshire, Mar Lodge Estate, Luibeg (NO036932), 21.ix.2000, 2 males, Malaise traps, leg. A. Godfrey, in author's collection.

*Discussion.* This species was described from Finland by Polevoi (2001) and has also been recorded from the Czech Republic (Ševčík, 2005). In the key by Hutson *et al.* (1980) it runs to couplet 14 because of the dark body coloration with the legs and base of the flagellum yellow, but differs from the included species in the relatively short flagellomeres and genital structure.

The genitalia bear some resemblance to *S. cliffoni*, but in that species tergite 9 is less tapered apically and with longer apical setae (according to Zaitzev, 1982 but not according to Hutson *et al.*, 1980) and the external lobe of the gonostylus is short without the produced apical part. The Nearctic species *S. iowensis* Zaitzev, 1982 is also similar, but has tergite 9 broader subapically and also has a simple outer lobe to the gonostylus.

### *Sciophila pomacea* nom. n.

*Sciophila ochracea* Stephens in Walker, 1856: 41, preocc. Macquart, 1826: 100

A new name is proposed for this species because the name in previous use is a homonym. *Sciophila ochracea* Macquart is a nomen dubium and type material is presumed to be lost. According to Macquart's description the abdominal tergites are black with yellow hind margins so it cannot be conspecific with *ochracea* Stephens in Walker, which is an entirely yellow species.

The identity of *Sciophila ochracea* Stephens in Walker was established by Edwards (1925), who found a type specimen in the Stephens collection (BMNH).

*Etymology.* The name is an adjective relating to the host fungus *Phellinus pomaceus* (Pers.) Maire, which forms brackets on trees of the family Rosaceae. The few British records are mainly in association with this fungus (Chandler, 1992; Falk & Chandler, 2005). Some specimens that were under *S. lutea* Macquart, 1826 in the Staeger collection (Zoological Museum, Copenhagen) were labelled as from a polypore fungus on *Salix* so *P. pomaceus* may not always be the host.

### Mycetophilinae

Keys in English including the majority of British species of this subfamily have recently appeared (Zaitzev, 2003), with illustrations of the male genitalia. Chandler (2005) reviewed this work from the point of view of the British fauna and provided a list of references covering those British species that are omitted from it.

*Mycetophila subsigillata* Zaitzev, 1999

Zaitzev (1999) recognised that *Mycetophila sigillata* Dziedzicki, 1884 of previous authors comprised two species and restricted the name *M. sigillata* to a species that was widespread in central Europe and the east Palaearctic, describing the other as *M. subsigillata*. It was incorrectly stated by Chandler (2001) that British specimens of *M. sigillata* agreed with Zaitzev's figures under that name. Subsequent examination of British and Irish material has so far only confirmed the occurrence here of *M. subsigillata*, so it is necessary to replace the name *M. sigillata* on the British list. Both species have been examined from Switzerland and *M. sigillata* has also been seen from France so it is possible that it too occurs in Britain.

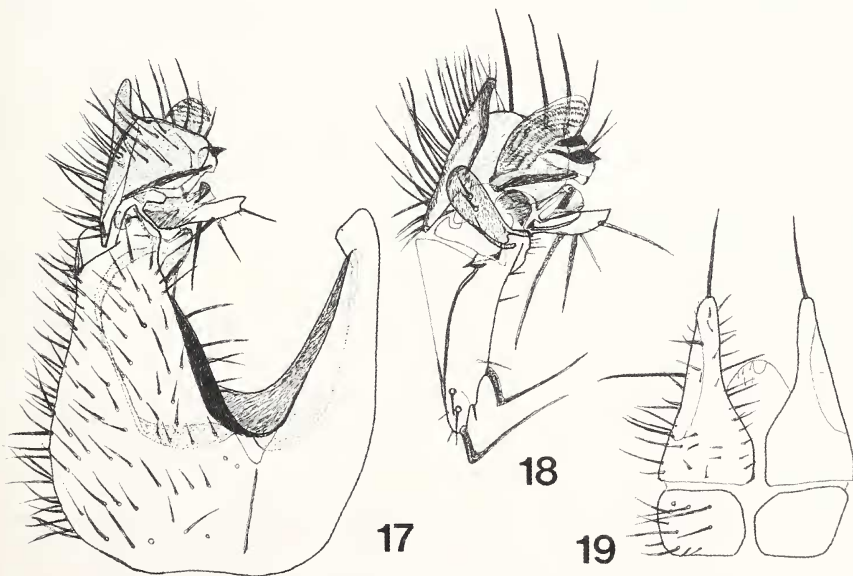
Material examined. SCOTLAND: 24 males from 17 localities in Sutherland, West and East Ross, Inverness-shire, Aberdeenshire, Argyllshire, Perthshire and the Isle of Mull. WALES: 1 male, Merionethshire, Coed Cymerau, 13.vii.1976, leg. A.E. Stubbs. IRELAND: 4 males from Sligo, Roscommon, Wicklow and Cork.

*Phronia tiefii* Dziedzicki, 1889

(Figs 17–19)

This is a distinctive species as the gonocoxites (Fig. 17) have a deep triangular excavation for about two thirds of their length and the gonostylus (Fig. 18) bears on the internal margin of its proximal lobe two setae that are conspicuously bent at right angles. This species is also of more slender build with longer legs than most *Phronia* species. The male genitalia were figured by Dziedzicki (1889) and Gagné (1975).

*Phronia tiefii* is a Holarctic species that is widespread in central and northern Europe. Both Scottish sites are native *Pinus* woodland with *Betula* and *Juniperus*.



Figs 17–19. Male genitalia of *Phronia tiefii* Dziedzicki, 1889: 17, ventral view of gonocoxites and gonostylus; 18, internal view of gonostylus; 19, dorsal view of tergite 9 and cerci.

Material examined.. SCOTLAND: Inverness-shire, Loch an Eilein (NH897080), 15.ix.2004, 2 males, leg. I. Perry; Rothiemurchus (NH9181000), 15.ix.2004, 1 male, leg. I. Perry.

### *Phronia vitrea* Plassmann, 1999

*Phronia vitrea* Plassmann, 1999: 6.

*Phronia carli* Chandler, 2001: 239, **syn. n.**

*Phronia longelamellata*: Lundström, 1906, misidentification, not Strobl, 1898

*Phronia carli* was proposed as a new name for the species added to the British list as *P. longelamellata* Strobl by Chandler (1992). During the preparation of the list for *Fauna Europaea* the type of *P. vitrea* (Plassmann, 1999) was examined and it was found that it was conspecific with the types of *P. carli*. This synonymy has already been indicated (Chandler, 2004) but is formally established here.

Type material examined.

Holotype male of *Phronia vitrea* Plassmann: SWEDEN, Abisko, 18–25.viii.1976, leg. K. Müller (ZSM).

Holotype male of *Phronia carli* Chandler: SCOTLAND, Perthshire, Bridge of Balgie, 10.vii.1998, leg. P.J. Chandler (NMS).

### ACKNOWLEDGEMENTS

The author is indebted to the collectors involved for referring material to me, in particular Andrew Godfrey and Ivan Perry for their interesting finds. The species recorded from Abernethy Forest were the result of surveys carried out by the Royal Society for the Protection of Birds. I am grateful to Mark Telfer for organising the sorting and identification of this material and to David Gibbs and John Ismay, who sorted the fungus gnats from these samples.

I am grateful to Jostein Kjaerandsen for kindly forwarding to me Norwegian material of *Sciophila salassea* and enabling me to include his record here and to Olavi Kurina for alerting me to this find. I also thank Alexander Zaitzev for informing me of the pending description of *S. krysheni* when he saw my figures of this in 1999.

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